INTERNATIONAL STANDARD

ISO 295

Third edition
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Plastics — Compression moulding of test specimens of thermosetting materials

Plastiques — Moulage par compression des éprouvettes en matières thermodurcissables

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 295 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This third edition cancels and replaces the second edition (ISO 295:1991), which has been technically revised.

Plastics — Compression moulding of test specimens of thermosetting materials

1 Scope

This International Standard

— establishes the general principles and lays down the procedure to prepare test specimens of heat- and pressure-moulded thermosetting material from different moulding compounds;

— specifies the details for test specimen preparation to be included with the test reports on properties;

— gives the general principles for the design of the mould intended for the preparation of the test specimens.

The conditions required for preparing, in a reproducible manner, test specimens which will give comparable results are discussed relative to the substance under consideration.

The method applies to phenolic resin, aminoplastic, melamine/phenol, epoxy and unsaturated-polyester based thermosetting powder moulding compounds (PMCs). Due to the nature of certain moulding compounds, their flow properties or other variable factors, it may be necessary to prepare the test specimens according to special methods. The latter are normally in an agreement between the interested parties and noted in the moulding report.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 472:1999, *Plastics — Vocabulary*

ISO 1183:1987, *Plastics — Methods for determining the density and relative density of non-cellular plastics*

ISO 3167:2002, *Plastics — Multipurpose test specimens*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 14526-1, *Plastics — Phenolic powder moulding compounds (PF-PMCs) — Part 1: Designation system and basis for specifications*

ISO 14526-2, *Plastics — Phenolic powder moulding compounds (PF-PMCs) — Part 2: Preparation of test specimens and determination of properties*

ISO 14526-3, *Plastics — Phenolic powder moulding compounds (PF-PMCs) — Part 3: Requirements for selected moulding compounds*

ISO 14527-1, *Plastics — Urea-formaldehyde and urea/melamine-formaldehyde powder moulding compounds (UF- and UF/MF-PMCs) — Part 1: Designation and basis for specifications*

ISO 14527-2, *Plastics — Urea-formaldehyde and urea/melamine-formaldehyde powder moulding compounds (UF- and UF/MF-PMCs) — Part 2: Preparation of test specimens and determination of properties*

ISO 14527-3, *Plastics — Urea-formaldehyde and urea/melamine-formaldehyde powder moulding compounds (UF- and UF/MF-PMCs) — Part 3: Requirements for selected moulding compounds*

ISO 14528-1, *Plastics — Melamine-formaldehyde powder moulding compounds (MF-PMCs) — Part 1: Designation system and basis for specifications*

ISO 14528-2, *Plastics — Melamine-formaldehyde powder moulding compounds (MF-PMCs) — Part 2: Preparation of test specimens and determination of properties*

ISO 14528-3, *Plastics — Melamine-formaldehyde powder moulding compounds (MF-PMCs) — Part 3: Requirements for selected moulding compounds*

ISO 14529-1, *Plastics — Melamine/phenolic powder moulding compounds (MP-PMCs) — Part 1: Designation system and basis for specifications*

ISO 14529-2, *Plastics — Melamine/phenolic powder moulding compounds (MP-PMCs) — Part 2: Preparation of test specimens and determination of properties*

ISO 14529-3, *Plastics — Melamine/phenolic powder moulding compounds (MP-PMCs) — Part 3: Requirements for selected moulding compounds*

ISO 14530-1, *Plastics — Unsaturated-polyester powder moulding compounds (UP-PMCs) — Part 1: Designation system and basis for specifications*

ISO 14530-2, *Plastics — Unsaturated-polyester powder moulding compounds (UP-PMCs) — Part 2: Preparation of test specimens and determination of properties*

ISO 14530-3, *Plastics — Unsaturated-polyester powder moulding compounds (UP-PMCs) — Part 3: Requirements for selected moulding compounds*

ISO 15252-1, *Plastics — Epoxy powder moulding compounds (EP-PMCs) — Part 1: Designation system and basis for specifications*

ISO 15252-2, *Plastics — Epoxy powder moulding compounds (EP-PMCs) — Part 2: Preparation of test specimens and determination of properties*

ISO 15252-3, *Plastics — Epoxy powder moulding compounds (EP-PMCs) — Part 3: Requirements for selected moulding compounds*

3 Terms and definitions

For the purposes of this document, the terms and definitions of ISO 472 and the following apply.

3.1
spatial temperature differences
differences in temperature existing simultaneously at various points inside the mould after the temperature adjustment device has been set at a given temperature and after a permanent thermal equilibrium has been reached

3.2
temporal temperature differences
differences in temperature that may occur at a single given point on the inside of the mould at various times after the temperature adjustment device has been set at a given temperature and after a permanent thermal equilibrium has been reached